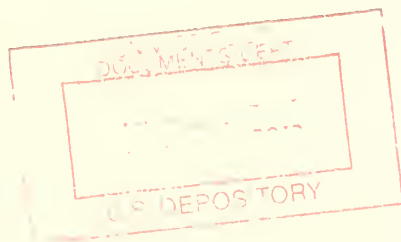


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EFFECT OF RESAW ON OUTPUT OF SINGLE BAND MILLS IN SOUTHERN HARDWOODS

May 1933



R 1245

Single band sawmill

UNIVERSITY OF FLORIDA

UNITED STATES DEPARTMENT OF AGRICULTURE
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FOREST PRODUCTS LABORATORY
Madison, Wisconsin

In Cooperation with the University of Wisconsin



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EFFECT OF RESAW ON OUTPUT OF SINGLE BAND MILLS IN

SOUTHERN HARDWOODS*

By

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Over one-third of a million board feet of southern oak logs was recently timed and tallied by the United States Forest Service through 8 sawmills located in Louisiana, Tennessee, and Arkansas. Half of these mills were equipped with a band and resaw, and half had only a single band saw. No quarter sawing was done during the test, so that the output from each group of mills should be comparable, except as influenced by the use of a resaw. The table gives the milling time per thousand board feet for each group of mills, the relative output per hour, and the labor cost for logs varying in size from 10 inches to 40 inches. Overrun is shown for all mills together, because there was no appreciable difference for the two groups of mills.

For comparative purposes, the 22-inch diameter class may be taken as an average for both groups of mills. The time required to saw a thousand board feet of lumber from 22-inch logs for single band mills was 14.3 minutes, whereas in the band and resaw mills only 8.4 minutes was necessary. Based on these time factors, the output for the first group would be 4,196 board feet an hour and, for the second group, 7,143 board feet. According to these figures, the output of a single band mill may be increased about 70 percent by the addition of a resaw. The time figures are for actual operation; no delay time is included.

To operate the single band mills, an average of 21 men were required at a cost under present wage scales, of 6.33 cents a minute and, for the band and resaw mills, 29 men at a cost of 8 cents a minute. Based on these costs and time figures, the single band mills produced lumber at a mill labor cost of 91 cents per thousand board feet, and the band and resaw mills at 67 cents per thousand board feet.

Summing up, the addition of a resaw to a single band mill increases the output 70 percent, and results in a decreased mill labor cost of 26 percent, also a substantial reduction of overhead costs.

*Published in American Lumberman, May 27, 1933.

Output of single band and single band and resaw mills when cutting
southern oak¹ logs of different sizes

Diameter: Overrun ² for:		Milling time per M:		Output per hour:		Mill labor cost	
inside: all mills:		(lumber tally) ³ :		(lumber tally) ⁴ :		per M (lumber	
bark: (net log		:		:		tally)	
: scale basis):		Single:	Single:	Single:	Band and:	Single:	Single
:		band:	band and:	band:	resaw:	band:	band and
:		:	resaw:	:	:	:	resaw
Inches:	Percent	Minutes		Board feet			
10:	50.8	30.8	25.5	1,943	2,353	\$1.95	\$2.04
12:	44.0	21.7	17.0	2,765	3,529	1.37	1.36
14:	31.5	17.9	12.3	3,352	4,878	1.13	.98
16:	21.0	16.1	9.9	3,727	6,061	1.02	.79
18:	12.5	15.3	8.7	3,922	6,897	.97	.70
20:	5.5	14.7	8.5	4,082	7,059	.93	.68
22:	2.0	14.3	8.4	4,196	7,143	.91	.67
24:	1.0	13.9	8.3	4,317	7,229	.88	.66
26:	.0	13.5	8.2	4,444	7,317	.85	.66
28:	-.5	13.5	8.1	4,444	7,407	.85	.65
30:	-1.0	13.5	8.0	4,444	7,500	.85	.64
32:	-1.5	13.8	7.9	4,348	7,595	.87	.63
34:	-1.5	14.5	8.0	4,138	7,500	.92	.64
36:	-2.0	15.3	8.4	3,922	7,143	.97	.67
38:	-2.0	16.2	9.2	3,704	6,522	1.03	.74
40:	-2.5	17.2	10.2	3,488	5,882	1.09	.82

¹Includes the following oaks: overcup, cherrybark, willow, lowland black, nuttall, and pin.

²Based on Scribner Decimal C Log Rule and green lumber tally.

³Actual running time.

⁴Green lumber tally.

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